

UNCLASSIFIED

PE NUMBER: 0604855F

PE TITLE: Operationally Responsive Launch

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2004

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0604855F Operationally Responsive Launch

Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	25.844	35.362	23.354	35.484	40.998	74.035	Continuing	TBD
A013 Small Launch Vehicle	0.000	25.844	35.362	23.354	35.484	40.998	74.035	Continuing	TBD

In FY2004, Project 64A013, Military Space Plane was changed to Small Launch Vehicle (SLV) to more accurately describe the demonstration activities in this project.

(U) **A. Mission Description and Budget Item Justification**

The 2002 Operationally Responsive Spacelift (ORS) Mission Needs Statement (MNS) established the requirement for responsive, on-demand access to, through and from space. This requirement encompasses the spacelift missions of delivering payloads to, or from, mission orbit and changing the orbit of existing systems to better satisfy new mission requirements. It also requires on-demand, flexible, and cost effective operations.

In December 2002 the DepSecDef directed the Air Force and the Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Operationally Responsive Space (ORS) effort to meet portions of this requirement. This joint technology development program has been named Force Application and Launch from CONUS (FALCON) and is focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide from and through space. Concept development, risk reduction and technology maturation are the key elements in the ORS program; and demonstrations, modeling and simulations are the critical tools.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	0.000	24.440	35.455
(U) Current PBR/President's Budget	0.000	25.844	35.362
(U) Total Adjustments	0.000	1.404	
(U) Congressional Program Reductions		-0.296	
Congressional Rescissions			
Congressional Increases		1.700	
Reprogrammings			
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			
FY04: \$1.7M Congressional add for SLC-3W modifications			

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Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0604855F Operationally Responsive Launch			PROJECT NUMBER AND TITLE A013 Small Launch Vehicle		
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
A013 Small Launch Vehicle	0.000	25.844	35.362	23.354	35.484	40.998	74.035	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The 2002 Operationally Responsive Spacelift (ORS) Mission Needs Statement (MNS) established the requirement for responsive, on-demand access to, through and from space. This requirement encompasses the spacelift missions of delivering payloads to, or from, mission orbit and changing the orbit of existing systems to better satisfy new mission requirements. It also requires on-demand, flexible, and cost effective operations.

In December 2002 the DepSecDef directed the Air Force and the Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Operationally Responsive Space (ORS) effort to meet portions of this requirement. This joint technology development program has been named Force Application and Launch from CONUS (FALCON) and is focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide from and through space. Concept development, risk reduction and technology maturation are the key elements in the ORS program; and demonstrations, modeling and simulations are the critical tools.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

(U) B. Accomplishments/Planned Program (\$ in Millions)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Initiate SLV system definition, systems engineering and flight test planning for Phase I		3.490	
(U) SLV system design and development, systems engineering and flight test planning for Phase II		8.000	21.000
(U) Support early demonstration flights and launch/test facilities evaluation and improvement		9.250	11.500
(U) Modify Space Launch Complex-3W at Vandenberg AFB, CA		1.700	
(U) Perform analysis, costing and assess utility for operationally responsive space concepts/requirements and Program Management support		3.404	2.862
(U) Total Cost	0.000	25.844	35.362

(U) C. Other Program Funding Summary (\$ in Millions)

	<u>FY 2003</u> <u>Actual</u>	<u>FY 2004</u> <u>Estimate</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) AF RDT&E, PE 0604856F, CAV		17.025	21.610	27.247	32.564	31.500	39.598	Continuing	TBD
(U) Defensewide RDT&E, DARPA,	7.500	17.500	25.000					Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2004
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604855F Operationally Responsive Launch	PROJECT NUMBER AND TITLE A013 Small Launch Vehicle
<p>(U) <u>C. Other Program Funding Summary (\$ in Millions)</u> PE 0603285E, FALCON</p> <p>(U) NASA funding provided to support multiple contractors 0.350</p> <p>(U) <u>D. Acquisition Strategy</u> Efforts will be executed by the joint AF/DARPA FALCON Program Office. Nine Phase I contracts were awarded in November 2003, Firm Fixed Price (FFP) with a duration of 6 months. An open competition will be held for Phase II contracts with multiple awards anticipated using an Other Transactions contract vehicle. Phase II awards are anticipated in 3QFY04.</p>		
Project A013 R-1 Shopping List - Item No. 59-4 of 59-7 Exhibit R-2a (PE 0604855F)		

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Exhibit R-3, RDT&E Project Cost Analysis									DATE February 2004			
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)					PE NUMBER AND TITLE 0604855F Operationally Responsive Launch				PROJECT NUMBER AND TITLE A013 Small Launch Vehicle			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2003 Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Nine Phase I contractors	FFP	various				3.490	Nov-03			0.000	3.490	TBD
TBD Phase II contractors	open competition					8.000	Jun-04	21.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		11.490		21.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Demo Flight Support	MIPR	SMC Det 12/RP/Kirtland AFB NM				9.250		11.500		Continuing	TBD	TBD
SLC-3W Modification	TBD	TBD/Vandenberg AFB CA				1.700					1.700	1.700
Subtotal Test & Evaluation			0.000	0.000		10.950		11.500		Continuing	TBD	TBD
Remarks:												
(U) Development Support and Management												
Perform analysis and assess alternative CAV concepts/requirements & program support	various	various				3.404		2.862		Continuing	TBD	TBD
Subtotal Development Support and Management			0.000	0.000		3.404		2.862		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		25.844		35.362		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

BUDGET ACTIVITY

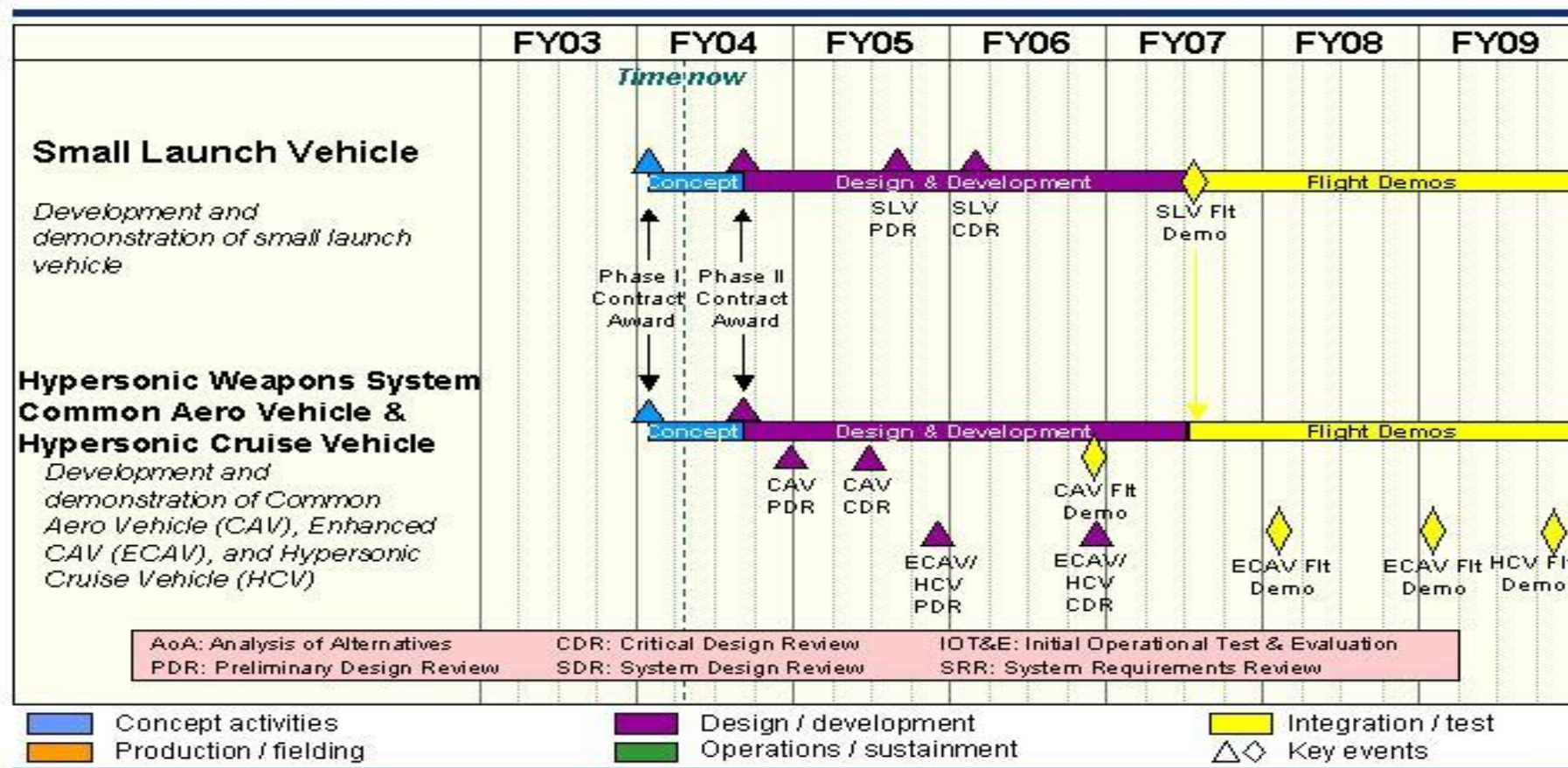
04 Advanced Component Development and Prototypes (ACD&P)

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0604855F Operationally Responsive Launch

PROJECT NUMBER AND TITLE

A013 Small Launch Vehicle



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Exhibit R-4a, RDT&E Schedule Detail

DATE

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04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0604855F Operationally Responsive
Launch

PROJECT NUMBER AND TITLE

A013 Small Launch Vehicle

(U) Schedule ProfileFY 2003FY 2004FY 2005

(U) System Definition (Phase I)

1-4Q

(U) Design and Development (Phase II) Contract Award

3Q

(U) Phase II Preliminary Design Review

2Q